

<b>Interview Summary</b>	Application No.	Applicant(s)	
	10/749,387	FUKUCHI ET AL.	
	Examiner	Art Unit	
	Samuel W. Liu	1653	

All participants (applicant, applicant's representative, PTO personnel):

(1) Samuel W. Liu. (3)\_\_\_\_\_.

(2) Daniel R. Evans. (4)\_\_\_\_\_.

Date of Interview: 24 January 2006.

Type: a) ☒ Telephonic b) ☐ Video Conference  
c) ☐ Personal [copy given to: 1) ☐ applicant 2) ☐ applicant's representative]

Exhibit shown or demonstration conducted: d) ☒ Yes e) ☐ No.

If Yes, brief description: the attachment (three pages of fax from Daniel Evans).

Claim(s) discussed: 1-11.

Identification of prior art discussed: none.

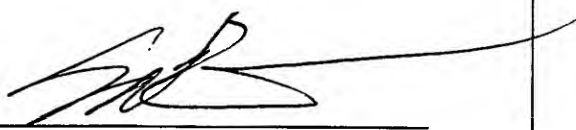
Agreement with respect to the claims f) ☒ was reached. g) ☐ was not reached. h) ☐ N/A.

Substance of Interview including description of the general nature of what was agreed to if an agreement was reached, or any other comments: Applicants agree to the examiner proposed amendment to claims 1-2, 4-5, 7 and 9.

(A fuller description, if necessary, and a copy of the amendments which the examiner agreed would render the claims allowable, if available, must be attached. Also, where no copy of the amendments that would render the claims allowable is available, a summary thereof must be attached.)

THE FORMAL WRITTEN REPLY TO THE LAST OFFICE ACTION MUST INCLUDE THE SUBSTANCE OF THE INTERVIEW. (See MPEP Section 713.04). If a reply to the last Office action has already been filed, APPLICANT IS GIVEN A NON-EXTENDABLE PERIOD OF THE LONGER OF ONE MONTH OR THIRTY DAYS FROM THIS INTERVIEW DATE, OR THE MAILING DATE OF THIS INTERVIEW SUMMARY FORM, WHICHEVER IS LATER, TO FILE A STATEMENT OF THE SUBSTANCE OF THE INTERVIEW. See Summary of Record of Interview requirements on reverse side or on attached sheet.

Examiner Note: You must sign this form unless it is an Attachment to a signed Office action.

  
 \_\_\_\_\_  
 Examiner's signature, if required

## Summary of Record of Interview Requirements

### Manual of Patent Examining Procedure (MPEP), Section 713.04, Substance of Interview Must be Made of Record

A complete written statement as to the substance of any face-to-face, video conference, or telephone interview with regard to an application must be made of record in the application whether or not an agreement with the examiner was reached at the interview.

### Title 37 Code of Federal Regulations (CFR) § 1.133 Interviews Paragraph (b)

In every instance where reconsideration is requested in view of an interview with an examiner, a complete written statement of the reasons presented at the interview as warranting favorable action must be filed by the applicant. An interview does not remove the necessity for reply to Office action as specified in §§ 1.111, 1.135. (35 U.S.C. 132)

### 37 CFR §1.2 Business to be transacted in writing.

All business with the Patent or Trademark Office should be transacted in writing. The personal attendance of applicants or their attorneys or agents at the Patent and Trademark Office is unnecessary. The action of the Patent and Trademark Office will be based exclusively on the written record in the Office. No attention will be paid to any alleged oral promise, stipulation, or understanding in relation to which there is disagreement or doubt.

The action of the Patent and Trademark Office cannot be based exclusively on the written record in the Office if that record is itself incomplete through the failure to record the substance of interviews.

It is the responsibility of the applicant or the attorney or agent to make the substance of an interview of record in the application file, unless the examiner indicates he or she will do so. It is the examiner's responsibility to see that such a record is made and to correct material inaccuracies which bear directly on the question of patentability.

Examiners must complete an Interview Summary Form for each interview held where a matter of substance has been discussed during the interview by checking the appropriate boxes and filling in the blanks. Discussions regarding only procedural matters, directed solely to restriction requirements for which interview recordation is otherwise provided for in Section 812.01 of the Manual of Patent Examining Procedure, or pointing out typographical errors or unreadable script in Office actions or the like, are excluded from the interview recordation procedures below. Where the substance of an interview is completely recorded in an Examiners Amendment, no separate Interview Summary Record is required.

The Interview Summary Form shall be given an appropriate Paper No., placed in the right hand portion of the file, and listed on the "Contents" section of the file wrapper. In a personal interview, a duplicate of the Form is given to the applicant (or attorney or agent) at the conclusion of the interview. In the case of a telephone or video-conference interview, the copy is mailed to the applicant's correspondence address either with or prior to the next official communication. If additional correspondence from the examiner is not likely before an allowance or if other circumstances dictate, the Form should be mailed promptly after the interview rather than with the next official communication.

The Form provides for recordation of the following information:

- Application Number (Series Code and Serial Number)
- Name of applicant
- Name of examiner
- Date of interview
- Type of interview (telephonic, video-conference, or personal)
- Name of participant(s) (applicant, attorney or agent, examiner, other PTO personnel, etc.)
- An indication whether or not an exhibit was shown or a demonstration conducted
- An identification of the specific prior art discussed
- An indication whether an agreement was reached and if so, a description of the general nature of the agreement (may be by attachment of a copy of amendments or claims agreed as being allowable). Note: Agreement as to allowability is tentative and does not restrict further action by the examiner to the contrary.
- The signature of the examiner who conducted the interview (if Form is not an attachment to a signed Office action)

It is desirable that the examiner orally remind the applicant of his or her obligation to record the substance of the interview of each case. It should be noted, however, that the Interview Summary Form will not normally be considered a complete and proper recordation of the interview unless it includes, or is supplemented by the applicant or the examiner to include, all of the applicable items required below concerning the substance of the interview.

A complete and proper recordation of the substance of any interview should include at least the following applicable items:

- 1) A brief description of the nature of any exhibit shown or any demonstration conducted,
- 2) an identification of the claims discussed,
- 3) an identification of the specific prior art discussed,
- 4) an identification of the principal proposed amendments of a substantive nature discussed, unless these are already described on the Interview Summary Form completed by the Examiner,
- 5) a brief identification of the general thrust of the principal arguments presented to the examiner,  
(The identification of arguments need not be lengthy or elaborate. A verbatim or highly detailed description of the arguments is not required. The identification of the arguments is sufficient if the general nature or thrust of the principal arguments made to the examiner can be understood in the context of the application file. Of course, the applicant may desire to emphasize and fully describe those arguments which he or she feels were or might be persuasive to the examiner.)
- 6) a general indication of any other pertinent matters discussed, and
- 7) if appropriate, the general results or outcome of the interview unless already described in the Interview Summary Form completed by the examiner.

Examiners are expected to carefully review the applicant's record of the substance of an interview. If the record is not complete and accurate, the examiner will give the applicant an extendable one month time period to correct the record.

### Examiner to Check for Accuracy

If the claims are allowable for other reasons of record, the examiner should send a letter setting forth the examiner's version of the statement attributed to him or her. If the record is complete and accurate, the examiner should place the indication, "Interview Record OK" on the paper recording the substance of the interview along with the date and the examiner's initials.

JAN. 24. 2006 3:03PM

OBLON SPIVAK

NO. 215 P. 1

Date:

Jan. 24, 2006

Signature:

[Handwritten Signature]

To: Examiner: Samuel W. Liu

Telephone Number: (571) 272-0949

Group Art Unit: 1653

Facsimile No.: (571) 273-0949

From: Daniel R. Evans, Ph.D.

Registration No.: 55,868

Telephone Number: (703) 413-2737

Date: January 24, 2006

RE: U.S. Application Serial Number: 10/749,387

Filed: January 2, 2004

Attorney Docket Number: 246515US0DIV

TOTAL NUMBER OF PAGES INCLUDING THIS PAGE: 3

COMMENTS

Dear Examiner Liu:

Please amend the claims of the present application as indicated on the enclosed sheets.

With best regards,

Daniel R. Evans, Ph.D.

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DRAFT

Date: 1/23/06

The amendment filed 12/28/05, which amends claims 1 and 9, and cancels claims 12-34 has been entered. Pending claims -11 are examined in this Office action.

### EXAMINER'S AMENDMENT

An Examiner's Amendment to the record appears below. Should the change and/or additions be unacceptable to Applicant, an amendment may be filed as provided by 37 C.F.R. § 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than payment of the Issue Fee.

Authorization for this Examiner's Amendment was given in a telephone interview with Vincent K. Shier on January \_\_\_\_, 2006. Applicants agree to the examiner proposed amendment to claims 1-2, 4, 7 and 9 (see below).

#### Amendments to the claim:

The pending claims 1-2, 4, 7 and 9 have been amended as follows. Please replace the previous claims with the claims shown below.

Claim 1 (*Amended*): A method for producing a protein having an antithrombotic activity, which comprises replacing, in a protein that has the amino acid sequence of SEQ ID NO: 1 and forms a tertiary structure, from N-terminus to C-terminus, composed of a first  $\beta$  strand ( $\beta$ 1), a first  $\alpha$  helix ( $\alpha$ 1), a second  $\alpha$  helix ( $\alpha$ 2), a second  $\beta$  strand ( $\beta$ 2), a loop, a third  $\beta$  strand ( $\beta$ 3), a fourth  $\beta$  strand ( $\beta$ 4) and a fifth  $\beta$  strand ( $\beta$ 5) in this order from the amino terminus, at least one amino acid residue in a region from  $\alpha$ 2 to  $\beta$ 2 in the protein corresponding to the sequence of the amino acid residues 47 to 72 in SEQ ID NO:1, a region from  $\beta$ 3 to  $\beta$ 4 in the protein corresponding to the sequence of the amino acid residues 94 to 111 in SEQ ID NO:1, or in the regions from  $\alpha$ 2 to  $\beta$ 2 and from the region from  $\beta$ 3 to  $\beta$ 4 so that electric charge of the amino acid residue is substituted towards positive direction as compared to the unsubstituted amino acid.

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**Claim 2 (Amended):** The method according to Claim 1, wherein at least one acidic amino acid residue in the region from  $\alpha 2$  to  $\beta 2$ , ~~the~~ the region from  $\beta 3$  to  $\beta 4$ , or in the regions from  $\alpha 2$  to  $\beta 2$  and the region from  $\beta 3$  to  $\beta 4$  is replaced with a neutral amino acid residue to change electric charge of the amino acid residue towards positive direction as compared to the unsubstituted amino acid.

Delete claim 4.

**Claim 7 (Amended):** The method according to claim 1, which further comprises deleting a region containing the loop structure existing between  $\beta 2$  and  $\beta 3$  in such a manner that the ~~secondary or~~ tertiary structures of  $\beta 2$  and  $\beta 3$  are maintained, or replacing the region with one or more amino acid residue(s) in a number required to maintain the ~~secondary and~~ tertiary structures of  $\beta 2$  and  $\beta 3$ , said amino acid residue(s) being selected from the group consisting of a glycine residue, an alanine residue, a serine residue and a cysteine residue.

**Claim 9 (Amended):** A method for producing a protein having an antithrombotic activity, which comprises replacing, in a protein that has the amino acid sequence of SEQ ID NO: 1 and forms a tertiary structure, from N-terminus to C-terminus, composed of a first  $\beta$  strand ( $\beta 1$ ), a first  $\alpha$  helix ( $\alpha 1$ ), a second  $\alpha$  helix ( $\alpha 2$ ), a second  $\beta$  strand ( $\beta 2$ ), a loop, a third  $\beta$  strand ( $\beta 3$ ), a fourth  $\beta$  strand ( $\beta 4$ ) and a fifth  $\beta$  strand ( $\beta 5$ ) in this order from the amino terminus, at least one amino acid residue in a region from  $\alpha 2$  to  $\beta 2$  in the protein corresponding to the sequence of the amino acid residues 47 to 72 in SEQ ID NO:1, a region from  $\beta 3$  to  $\beta 4$  in the protein corresponding to the sequence of the amino acid residues 94 to 111 in SEQ ID NO:1, or in the regions from  $\alpha 2$  to  $\beta 2$  and from the region from  $\beta 3$  to  $\beta 4$  so that electric charge of the amino acid residue is substituted towards positive direction as compared to the unsubstituted amino acid, which further comprises covalently bonding a polyoxyalkylpolyol group to the protein.

**Conclusion:** claims 1-11 are allowed.

Samuel W. Liu, Ph.D.  
Art Unit 1653, Examiner